THE FARMING WORLD.

FOR BETTER HIGHWAYS.

Former Vice President Stevenson Interested in the Movement.

Agitation for good roads is meeting the cordial indorsement of public men who stop to give it more than a passing thought. Ex-Vice President Adlai E. Stevenson is now among those who strongly commend the movement of the League of American Wheelmen for better highways. In a recent letter he said:

"I am in full sympathy with the efforts now being made to secure good roads throughout our country. This is a living question. There is little difficulty in getting from one large city to another, or even in crossing the continent, but the important question is how to get from the country home to the schoolhouse, to the church, to the market. It is a gratifying fact that this subject is now undergoing thorough discussion in many of our states. The result will be beneficial. Like other important questions, it will work out its own solution. I agree with Gov. Markham that 'good roads mean advanced civilization.'"

When people like Mr. Stevenson begin to emphasize the need of better country highways, surely there must be a great public interest to be subserved. And what are the facts? Mr. Stevenson lives at Bloomington, Ill., in the center of a district whose roads are notoriously bad. It is not the only district of its kind. There are dozens of such districts in every state in the union. The Bloomington district is only a sample, and should not be singled out as an illustration, but for coincidence. A prominent paper in Illinois recently published this interesting dispatch from its Bloomington correspondent:

"The embargo of mud is complete in central Illinois. Farmers who have lived in McLean county more than half a century declare that they have never seen the roads so utterly impassable as they are now. General stagnation in retail trade is the result. Farmers find it impossible to come to town in a light vehicle drawn by four horses. Much of the corn stored in cribs has rotted on the cob and crumbles in the sheller. The condition of grain is giving the farmers serious trouble."

Another interesting piece of news comes from Massachusetts. In a town of about 5,000 inhabitants in that state a dwelling house was burned to the ground because the roads were too muddy for the fire department to reach it. Insurance men claim that the town can be held responsible for the loss.

COST OF BAD ROADS.

Some Figures Collected by the Department of Agriculture.

According to statistics collected by the office of road inquiry of the department of agriculture, the amount of loss each year by bad roads of the country is almost beyond belief. Some 10,000 letters of inquiry were sent to intelligent and reliable farmers throughout the country, and returns were obtained from about 1,200 counties, giving the average length of haul in miles from farms to markets and shipping points, the average weight of load hauled and the average length per ton for the whole length of haul. Summarized, it appears that the general average length of haul is 12 miles, the weight of load for two horses 2,000 pounds, and the average cost per ton per mile 25 cents, or three dollars for the entire load,

Allowing conservative estimates for tonnage of all kinds carried over public roads, the aggregate expense of this transportation is figured at $946,414,600 per annum. Those in a position to judge calculate that two-thirds, or nearly $631,000,000, could be saved if the roads were in reasonably good condition. At $4.00 per mile a very good road can be constructed, and if an amount equaling the savings of one year were applied to improving highways, 157,000 miles of road in this country could be put in condition. The effect of this would be a permanent improvement, and not only would the farmer be astonished in the sudden reduction in his road tax, but he would also wonder at the remarkable falling off in the cost of transportation. He would also find that he required fewer horses and less feed for them. He could make two trips to market a day instead of one, when ability to get his goods there at a time when high prices are ruling is a matter of great consequence. Farmers are beginning to apply a little simple arithmetic to some of these matters, and it is not too much to expect that in the near future we shall see a decided revolution in the condition of our rural highways.

When Trees Stop Growing.

Occasionally there will be a tree which makes no growth, despite every effort to provide it with all that it requires. The tree may show no signs of disease, but simply makes no progress, being no larger at the end of the third or fourth year than at the beginning of the second year. It is difficult to discover the cause, but sometimes there may be root lice, or disease, under the surface. Remove the top soil, exposing as much of the roots as possible, and over an area of ten feet around the tree. Add a pound of concentrated lye to four gallons of boiling water; let it dissolve, apply warm (not too hot) over the roots, scatter a peck of air-slacked lime next, and return the top soil again. —Rural World.

Why He Is Poor.

The farmer's overalls are worn,
His back with toil is bent;
His faded coat is old and torn,
He can't lay up a cent.
He markets half a load of grain,
For mud his farm enthralls,
And so the extra trips explain
The farmer's overhauls.
—Good Roads.

Small fruit growing requires considerable work, but will pay for the effort.

BREEDING OF GOATS.

In England Dairymen Pay Much Attention to It.

It is within the last 20 years that the movement toward improved breeds of goats has been going on in Europe. The first British show of goats was held in 1875 under the patronage of Baroness Burdett-Coutts, who has always taken interest in the matter. In 1879 the British Goat society was organized with the object of improveing the breeds of goats and increasing their capabilities for milk production. Under the auspices of that society flock books and a stud goat register are published at frequent intervals, and classes are provided for goats at the leading shows of the United Kingdom. The points aimed for in breeding were a fine, smooth coat of short, glossy hair, horns, if any, small, dark colored and curving backward, with large milk yield fixed as an established characteristic of the ewes. Great improvement has resulted not only from careful selection among native goats, but also, and to a still larger extent, from the importation of superior breeds. One of the most successful breeds yet introduced is the Toggenburg from Switzerland. These goats have many desirable qualities. They are short haired, nearly always hornless, and are unsurpassed as milkers. The accompanying illustration portrays the Toggenburg goat Swiss Beauty, which took the second prize for hornless goats at the last British dairy show, the first prize going to a cross-bred of the same exhibitor, Swiss Beauty was bred and exhibited by Mr. A. C. McMinn, of London, who has for some time been a spirited fancier and breeder. —Orange Judd Farmer.

PRIZE TOGGENBURG GOAT.

MICROSCOPIC LIFE.

Bacteria Play an Important Part in the Work of the Dairy.

"The necessity of bacteriology in dairy products" was discussed by Prof. McDonnell, of the Pennsylvania state college, at the recent dairymen's meeting. As it was exceedingly interesting, I report a few of the salient points.

The speaker stated that only a few years ago physicians were the only persons who were thought to have any interest in this subject, while the fact is, we are indebted to bacteria for very many of the good things of life. Bacteria come to us as friends and not always as enemies, as was supposed a few years ago.

Every delicacy supplied to us is largely dependent upon bacteria. We could have neither good butter nor cheese without them; in fact nothing of a delicacy in the dairy can be had without bacteria, except condensed milk, which he did not regard as a delicacy.

These bacteria all belong to the vegetable kingdom, are of vegetable origin, and are of many different forms. Some move through liquids while others remain quiet; 25,000 of them can lie side by side in an inch of space. Some of the bacteria act only on dead matter, while another class produces the acid of milk, and others produce the aroma so very desirable in butter—and also the flavor.

If dairymen were careful to have clean stables for their cows very many undesirable bacteria could be kept from the milk and less trouble would result. It is not true, as some seem to think, that the bacteria come from the cow with the milk. If milk could be kept from coming in contact with the air—which is filled with bacteria—while the cow is being milked, it could be kept pure for an indefinite period.

Great care should be taken to have all milk vessels clean if the dairyman desires the best possible product. Typhoid fever bacteria develop very rapidly in milk, and as a result the malady often spreads very rapidly. Scalding milk kills all organisms.—George Spitler, in Ohio Farmer.

PISTOL CASE BEARER.

The New Orchard Pest Investigated by Prof. Slingerland.

Prof. M. V. Slingerland, of the Cornell university agricultural experiment station, has made a study of the new orchard pest, and says that the "pistol case bearer" is more destructive than any of the "case bearers" ever known. He believes it to be an American insect. In Pennslyvania it has already destroyed 8,000 trees, and has now made its appearance in New York. Its range of food plants includes orchard fruits, and probably the chestnut. It occurs from Canada southward, through New York and Pennsylvania, where only it has been destructive, and westward through Nebraska into New Mexico. It is very small, and would hardly be noticed except for the "cases" which the little caterpillars wear, and which reveal them to the casual observer. Their form is pistol-shaped. They are tough, leathery texture, apparently made from silken threads, interwoven with pubescence from leaves. These little cases are odd-looking objects, and are seen projecting from flower buds, leaves or twigs. It is doubted if any spray will reach the insect in its winter quarters.—Chicago Inter Ocean.

BILLY MULLIGAN'S LAST DAY.

A Terror of the Pacific Slope Who Made His Taking-Off Memorable.

"His name was included in the little list of Nevada desperadoes made by Mark Twain in 'Roughing It,' said the Nevada pioneer. He did not say "Mark Twain," by the way, but "Sam Clemens," the name by which all old Nevadans and Californians knew the famous humorist. The pioneer was talking of men of his time who had died with their boots on, and Billy Mulligan was the character who just now was to the front. Some of the hostile mix-ups and shooting matches in which that young Irishman had taken a hand had been related, and now the narrator had come to the day of his taking off.

"Billy Mulligan had run a long string, and lasted a good while for a man of his temper and practices—for he was tough, out and out," continued the pioneer. "His neck was in danger in the days of the San Francisco vigilance committee, and he ran some narrow chances with the law and lynchers afterward. He was a brave, desperate man, handy with weapons, and would fight 'at the drop of the hat.' But he pulled through all trouble until the time came, which seems sooner or later to befall almost every desperado, when the strain of danger and the effect of constant drinking and excitement got the better of his nerves and judgment. When a desperado gets that way there are two courses that he may take—quit the country, quit drinking and get to work at an honest calling, or stay and get killed. The last was what Mulligan chose, but he kept the business in his own hands and forced the pace to the end.

"It was at Carson City that the end came to Billy Mulligan. The cards had gone against him all night. The liquor he had drunk had made him ugly as he walked out of the Esmeralda saloon one morning. Next door was a laundry, and a Chinaman, ironing clothes, lifted his face to the window just as Mulligan was passing. Without a word the desperado drew his pistol and fired through the glass, blowing the Chinaman's brains out, then went on to the hotel where he was staying and upstairs to his room in the top story. The door of his room opened near the head of the stairway, and when the sheriff's officers came to arrest him for killing the Chinaman he stood them off with his revolvers. They knew it meant certain death to some of them to try to rush up the stairway, and they stopped at the foot to consider. John Coleman, a particular friend of Mulligan, who was with them, tried to persuade him to surrender.

"'No use, John,' said Mulligan. 'I shan't be taken alive. This is my last day and the game'll end right here. You keep away and don't get mixed up in the trouble.'"

"Coleman was working along up the stairway as he talked, with the object, perhaps, of getting near enough to the desperado to disarm him.

"'Stop where you are, John,' said Mulligan; 'one step nearer and I'll kill you.'

"Coleman made another step forward and Mulligan shot him through the heart. He permitted the others to take the body away, keeping them covered with his pistols all the time. A crowd gathered in the hotel and the public square which it faced, and plans were discussed for capturing Mulligan; but his character for deadly desperation was such that volunteers were scarce. At last it was decided to call out the militia company and take the desperado in his stronghold by regular assault.

"The troops were mustered in double line in the public square, facing the hotel, and waiting the order to advance. Through the window of his room in the third story Mulligan could be seen now and then as he walked to and fro between the stairway and the window keeping watch against a surprise in either direction. Then as the face of the desperado appeared once more at the window, one of the soldiers fired with his rifle, killing his instantly. It was an unexpected shot which undoubtedly saved several lives that would almost certainly have been sacrificed in carrying the room by storm.

"Billy Mulligan was a New Yorker by birth, and was a typical representative of the old-time California 'tough' gambler—a class which got its tone and manners from the New York of the volunteer firemen and 'Dead Rabbit' days. Quick of motion—some of them could pick a fly from the wall with the thumb and finger four times out of five—stern and short-spoken except where it was part of their game to be suave, rough-and-tumble fighters, fashionably dressed, with more of ornaments than southern gamblers often wear, and distinguished by heavy black mustaches—they ran their course in San Francisco, which was headquarters from which they went to the new mining communities to stay while these flourished or until they were driven out. They had their day—most of them were shot or hanged, or they died in want. Here and there stranded in some out-of-the-way western community some decrepit survivor is found of the old gambler-desperado class of which Billy Mulligan was a shining example."—N. Y. Sun.

California Ostrich Plumes.

The Los Angeles papers say that in the month of April the heaviest consignment of ostrich plumes ever shipped from California was sent to Paris. The industry is no longer an experiment in that state. Already the business has an investment of $200,000, which is likely to be augmented by a third during the coming season. The sales of plumage this year from the ostrich farms at Fallbrook, Coronado, Anaheim, Pasadena, Pomona and Santa Monica foot up $190,000. The percentage of profit on the amount invested is large enough to make the business profitable.—Chicago Inter Ocean.

Not His Fault.

Growler—Did you hear that Lusher has a gallon of water on his chest?

Rusher—Yes, and I've been wondering all day how they ever got it into him.—Up-to-Date.

ABOUT STANDARD TIME.

Why the System Now Prevailing in This Country Was Adopted.

The old railroad man sat behind the counter of a Chestnut street ticket office, enjoying a mild and meditative cigar. A young man with an interrogation point sort of a face leaned over the counter and said: "Beg pardon, may I ask a question? Thanks. I observe that all railway time tables have conspicuously printed upon them 'Eastern standard time.' I suppose I'm an awful ignoramus, but I'm blest if I ever met anyone who could clearly explain the meaning of that. Do you know?"

"I rather think I do," replied the old railroad man. "Prior to 1883 the clocks of this country were in confusion indescribable. Every city, town and village had its own local time, fixed by solar observations. Then every railroad had its own standard of time, and some of the large systems had several different varieties of time, covering their several divisions respectively. In those days if you went into a strange town and asked one of its people the time of day, he would reply with the question: 'City time or railroad time?' the variation between the two being in some cases nearly an hour. A man traveling only from Boston to Washington desirous of keeping his watch even with the time table would use no less than five different standards of time. He would start by Boston time, at Providence he would reset his watch to Providence time, at New London to New York time, at New York—not as one might suppose to the local time of the metropolis, but to Philadelphia time, which was then just five minutes slower than New York time. All the way from New York to Baltimore his train would be governed by our own statehouse clock, but at Baltimore he would have his watch back two minutes, as the train there took Washington time. Were he to stop off at Trenton or Wilmington or some other intermediate point, the situation would be further complicated, for he would encounter 'local' time as soon as he had left the depot.

"Now," continued the old railroad man, relighting his cigar, "the enormous dangers and inconveniences of this system, or lack of system, early became manifest, and schemes for its betterment were under discussion for years. Obviously, the ideal solution of the difficulty lay in the establishment of geographical zones or belts, defined by arbitrary lines running north and south, the time of some one designated point within each zone to prevail all over the territory within its boundary lines. Thus much agreed upon, the real trouble began. The smallest crossroads hamlet, as well as the largest city, was willing that every other community in its particular zone should give up its local time, but strenuously protested against changing its own. After protracted discussion the several national organizations of railway officials resolved to disregard all local clamorings and agreed upon the system of time standards now in use.

'This, briefly stated, consists in dividing the country into belts of 15 degrees of longitude each, and taking the actual solar time of some important place within each belt as the standard time of all other places in that belt. As 15 degrees of longitude are equivalent to one hour of time, it follows that the time of any given belt is one hour earlier than that of the belt west, and one hour later than that of the belt east of it. Eastern standard time is that of places directly upon the 75th meridian west of Greenwich, and is consequently just five hours later than Greenwich time. Roughly speaking, eastern standard time prevails from Portland on the east to Buffalo and Pittsburgh on the west, and when it is five o'clock p. m. at Greenwich, England, it is precisely 12 o'clock noon all over the area thus defined, regardless of the true or solar time.

"Central standard time is fixed by the 19th meridian. If you start from Philadelphia and travel west of Pittsburgh you must set your watch back just one hour on leaving the smoky city. At Yankton, N. D., you strike mountain standard time, and your watch goes back another hour. If you go on to the Pacific coast you will set it back a third hour, for you will then be in the zone of Pacific standard time, fixed by the 120th meridian west of Greenwich. To sum it up, instead of a thousand standards of time, as formerly, your watch will show the exact and universal time at every point in America by resetting the hands three times between the Atlantic and Pacific."—Philadelphia Record.

Gumbo Patois.

There is much in understanding the peculiarities of the gumbo patois. There is no rule to go by. It is either instinct or hard study that solves the problem. The other day a Creole had a man arrested for stealing a cow. He was put on the witness stand and interrogated about the bovine.

"To whom did the cow belong which this defendant was trying to sell?" asked the lawyer retained by the despoiled.

The face of the despoiled was a blank.

"From whom did the man steal the cow he tried to sell?" reinterrogated the lawyer.

The witness shrugged his shoulders in token of his inability to understand. Then one of the audience spoke to the lawyer.

"Let me ask the witness about the cow," he said. "I can make him understand."

The necessary permission was given, and the man who knew it all took his stand in front of the witness.

"The cow," yelled he, "who she be?"

The witness smiled broadly as he answered in tones most positive:

"She be me."—N. O. Times-Democrat.

—Lots of people have the good fortune to get money-making jobs, and never save a dollar.—Washington Democrat.

GAVE THE WAITER HIS FEE.

An Irascible Man's Ignorance of the Law Costs Him a Liberal Tip.

The globular and florid old gentleman, as he sat down at the table, pulled a dollar bill out of his pocket, deliberately tore it in two, handed one piece to the waiter, replaced the other in his pocket, and said:

"Waiter, if I am satisfied, you get the other half. Do you understand?"

"Yes, sir," replied the functionary, and became as assiduous as a mother with her first child.

But for some inexplicable reason the old gentleman grew more and more dissatisfied as his meal progressed, until, as he arose from the table, he simply scowled angrily at the expectant waiter.

"Excuse me, sir, but—" the waiter insinuated obsequiously.

"Naw," snarled the old fellow in reply.

"Oh, yes; I think you will," observed the waiter, his backbone visibly stiffening.

"Don't you be impudent, young man," advised the old fellow, threateningly.

"Don't you be a chump," advised the waiter, contemptuously.

"Why, why, wh—at?" screamed the old gentleman, swelling like an enraged turkey cock. "I'll—I'll report you for insolence, you—you villain!"

"I don't think you will," retorted the waiter, calmly and firmly. "Come, hand over the other half of this bill. I need a dollar to go to the theater."

"Explain yourself, you rascal," demanded the old fellow, a great and portentous calm enveloping him. "Now, what does this mean?"

"It means at this minute you are a lawbreaker, sir," replied the waiter, suavely. "Mutilating the currency is a crime, and you have mutilated a dollar bill. Therefore, unless I get the dollar you'll be pinched. See?"

As the waiter pocketed the dollar, he smiled.—Cincinnati Enquirer.

Over a Ton a Day.

Last year 425 tons of steel were used by the Winchester Repeating Arms Co., New Haven, Ct., in the manufacture of rifles and shot guns. This enormous amount represents a consumption of over a ton a day. This information may surprise people who are not familiar with the great demand for Winchester guns, but it will not anyone who has used a Winchester, for they appreciate the excellence and popularity of this make of gun. Winchester guns and Winchester ammunition are unequalled for their many points of superiority. Uniformity and reliability are watchwords with the Winchesters and the results their guns and ammunition give show the great care taken in manufacturing them. Send for a large illustrated catalogue free.

Shirt-Waist Damages.

First Summer Resorter—Isn't that Chollie Bowled just horrid? I hadn't known him for a day when he tried to kiss me.

Second Summer Resorter—And me, too. But it is only business with him. His father owns the laundry.—Indianapolis Journal.

"There are a great many laws on the statute books which don't seem to command much attention," remarked the political protege. "Young man," replied Senator Sorghum, "you are looking in the wrong place. Some of those laws may not amount to much in statute books. But they have made a heap of difference in bank books."—Washington Star.

In order not to be an exception to the rule, Guibollard ran down his mother-in-law. "Briefly, what have you against her?" asked his friend, impatiently. "Her daughter," was the laconic reply.—L'Illustre de Poche.

THE MARKETS.

	CINCINNATI, July 8.	
LIVE STOCK--Cattle, commons	2 25	@ 3 00
Select butchers	3 85	@ 4 15
CALVES--Fair to good light	5 00	@ 5 50
HOGS--Common	3 00	@ 3 35
Mixed packers	3 45	@ 3 50
Light shippers	3 50	@ 3 60
SHEEP--Choice	3 25	@ 3 50
LAMBS--Spring	5 00	@ 5 15
FLOUR--Winter family	3 00	@ 3 45
GRAIN--Wheat--No. 2 red		@ 78½
No. 3 red		@ 76½
Corn--No. 2 mixed		@ 29¾
Oats--No. 2		@ 21½
Rye--No. 2		@ 57
HAY--Prime to choice		@10 25
PROVISIONS--Mess pork		@ 9 12½
Lard--Prime steam		@ 3 85
BUTTER--Choice dairy	6	@ 8
Prime to choice creamery		@ 16½
APPLES--Per bbl	2 25	@ 2 75
POTATOES--New Per bbl	1 75	@ 2 50
NEW YORK.		
FLOUR--Winter patent	4 10	@ 4 25
GRAIN--Wheat--No. 1 north n.		@ 78
No. 2 red	75½	@ 77⅛
CORN--No. 2 mixed		@ 34
OATS--Mixed		@ 23¼
PORK--New mess	8 25	@ 8 75
LARD--Western		@ 4 15
CHICAGO.		
FLOUR--Winter patents	4 20	@ 4 40
GRAIN--Wheat--No. 2 red		@ 70⅛
No. 2 Chicago spring		@ 70⅞
CORN--No. 2	25¾	@ 26½
OATS--No. 2		@ 17½
PORK--Mess	7 70	@ 7 75
LARD--Steam		@ 4 05
BALTIMORE.		
FLOUR--Family	3 75	@ 4 15
GRAIN--Wheat--No. 2	70½	@ 71
Corn--Mixed	30½	@ 30⅝
Oats--No. 2 white	25	@ 26
LARD--Refined		@ 5 11 50
PORK--Mess		@16 85
CATTLE--First quality	4 00	@ 4 35
HOGS--Western	4 00	@ 4 10
INDIANAPOLIS.		
GRAIN--Wheat--No. 2		@ 76
Corn--No 2 mixed		@ 24
Oats--No. 2 mixed		@ 18½
LOUISVILLE.		
FLOUR--Winter patent	3 75	@ 4 00
GRAIN--Wheat--No. 2 red		@ 82
Corn--Mixed	26	@ 26½
Oats--Mixed		@ 20½
PORK--Mess		@ 8 50
LARD--Steam		@ 3 6½

Queen & Crescent.

During the Tennessee Centennial and International Exposition at Nashville, Tenn., a low rate special tariff has been established for the sale of tickets from Cincinnati and other terminal points on the Queen & Crescent Route.

Tickets are on sale daily until further notice to Chattanooga at $6.75 one way or $7.20 round trip from Cincinnati, the round trip tickets being good seven days to return; other tickets, with longer return limit, at $9.90 and at $13.50 for the round trip.

These rates enable the public to visit Nashville and other Southern points at rates never before offered. Vestibuled trains of the finest class are at the disposal of the passenger, affording a most pleasant trip, and enabling one to visit the very interesting scenery and important battle-grounds in and about Chattanooga, Lookout Mountain and Chickamauga National Military Park. Tickets to Nashville to visit the Centennial can be repurchased at Chattanooga for $3.40 round trip. Ask your ticket agent for tickets via Cincinnati and the Q. & C. Route South or write to

W. C. RINEARSON, Gen'l Pass'r Agent, Cincinnati, O.

Mistakes and Mistakes.

It was the eve of their bridal day.

"Perhaps, after all," he faltered, gazing tenderly yet seriously down into her lustrous eyes, "we shall make a mistake in marrying."

"How you frighten me, Edwin," she exclaimed, with a shiver. "Come, let us rehearse again, and make assurance doubly sure."—Detroit Journal.